

# Carbon Capture, Utilization and Storage

## Developing Storage Hubs to Meet Growing Demand

### Growing Carbon Capture, Utilization and Storage (CCUS) in Alberta

Carbon Capture, Utilization and Storage (CCUS) is proven, safe and effective. It is also critical to meeting Canada's long-term energy needs and climate goals.

Alberta is among the global leaders in developing CCUS technology, having taken considerable steps on commercial-scale funding, regulatory enhancements, and knowledge sharing.

Continuing to advance this technology will help Alberta diversify the energy sectors and reduce emissions in many different industries, including concrete and fertilizer, along with hydrogen development.

### Carbon Storage Hubs

To help meet the growing demand, the Alberta government is issuing carbon sequestration rights through a series of competitions to enable the development of carbon storage hubs across the province.

The first competition sought proposals that would explore the development of carbon sequestration hubs to service emissions from Alberta's industrial heartland. A second Request for Full Project Proposals is currently underway to service other areas of the province not covered under the first competition.

A carbon sequestration hub will be an area of pore space deep underground overseen by a successful private industry proponent who can effectively plan and operate these hubs to store carbon dioxide captured from various emissions sources as a service to industrial clients. Any approved project will need to pass rigorous standards for safety.

Taking this approach will ensure that carbon capture and sequestration will be deployed responsibly and strategically over the long term in the best interest of Albertans.

### Process to Develop Storage Hubs

Companies selected to explore how to safely develop these storage hubs will be invited to work with government to further evaluate the suitability of their locations for storing carbon from industrial emissions.

Once the evaluation demonstrates that the proposed project can provide safe and permanent storage, companies can then work with government to develop an agreement that provides them with the right to inject captured carbon dioxide. This agreement will also ensure that they will provide open access and affordable use of the hub.

Throughout this process, the proponents are also undertaking various regulatory approvals, consultation, and business development.

### Regulatory Process

Granting rights to evaluate potential carbon sequestration locations is only one step in a robust regulatory pathway for potential hub projects. Other steps include:

- Evaluation of the formation to ensure it's suitable for carbon sequestration.
- Ongoing monitoring, measurement and verification activities.
- Consultation with land owners, municipalities and other stakeholders.

In addition, for a proposal to move forward, the operator will need to obtain regulatory approvals from the Alberta Energy Regulator for the CO<sub>2</sub> capture, transportation, and subsurface injection activities.

### Upcoming and Ongoing Competitive Process

More information about carbon sequestration tenure management and the competitions to develop storage hubs can be found at: <https://www.alberta.ca/carbon-sequestration-tenure-management.aspx>.

### Roles and Responsibilities Alberta Government

The Alberta government provides the oversight for the development of storage hubs. This includes:

- Coordinating the competitions.
- Evaluating proposals for their suitability.
- Granting the rights for the hub to sequester carbon.
- Ensuring that the terms of the agreements are met as it relates to the safe, efficient and effective storage of industrial carbon emissions.

## **Proposed Projects**

The responsibilities of hub operators include:

- Private industry will be responsible for the development, management, and operation of any carbon sequestration storage hub.
- Successful proponents are expected to work to identify and address potential subsurface interactions and conflicts.
- Hub operators will be expected to obtain all necessary regulatory approvals, and ensure the safe and effective operation of the hub.
- Successful proponents will provide open access to all emitters and fair service rates as well as have the technical, financial, and operational capacity to undertake the operation.
- An agreement holder will be subject to future regulatory structures and mechanisms as they evolve that will ensure fair service rates and open access to the hub with a just and reasonable cost recovery.

## **Alberta Energy Regulator**

The Alberta Energy Regulator (AER) provides regulatory approvals to ensure that the activity is safe and environmentally responsible.